This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently amended) A method comprising determining a head positioning profile for a first track in relation to a track profile for the first track, a track profile for a second track, a track profile for a third track and a non-zero weighting value, the method further comprising a prior step of comparing the track profile for the first track to a predetermined threshold, and performing the determining step in relation to said comparison, wherein a track profile is represented by WI, the first track is represented by n, the second track is represented by n-1, and the third track is represented by n+1, the head positioning profile is represented by ZAP(n), and wherein ZAP(n) = -WI(n) – alpha*[WI(n-1) + WI(n+1)], where alpha is a number between 0 and 1.

2. (Previously Presented) The method of Claim 1, wherein each track profile is a PES RRO track profile.

3-4. (Cancelled)

5. (Previously Presented) The method of Claim 1, wherein the non-zero weighting value is substantially equal to 0.5.

6. (Currently amended) A method of compensating for positioning errors in a data storage device, comprising a step of determining a head positioning profile for a first track in relation to a track profile for the first track in combination with a track profile for a second track and a non-zero weighting value, wherein the head positioning profile of the determining step is further determined in relation to ZAP information for a third track.

7. (Previously Presented) The method of claim 6, further comprising a step of selectively performing the determining step for particular tracks on the data storage device based upon whether a given track has a track profile that exceeds a predetermined threshold value.

8. (Cancelled).

9. (Previously Presented) The method of Claim 6, wherein the head positioning profile is determined in relation to $ZAP(n) = -WI(n) - alpha*[WI(n-1) + WI(n+1)]$, wherein $WI(n)$ is the track profile for the first track, $WI(n-1)$ is the track profile for the second track, $WI(n+1)$ is a track profile for a third track, and wherein alpha is the non-zero weighting value.

10. (Previously Presented) The method of Claim 9 wherein alpha is substantially equal to 0.5.

11. (Previously Presented) A system for compensating for positioning errors in a data storage device having a plurality of tracks by zero acceleration processing (ZAP), comprising:

> means for selectively determining which of the plurality of tracks to ZAP; and

> means for ZAPing at least one of the selectively determined tracks using a track profile of the track being ZAPed in addition to a track profile of a track adjacent to the track being ZAPed to generate a head positioning profile for the at least one track.

12. (Previously Presented)   The system of Claim 11, wherein each track profile is a PES RRO track profile.

Claim 13 (Cancelled).

14. (Previously Presented) The method of claim 1, wherein the first and second tracks are disposed on a rotatable data storage medium.

15. (Previously Presented) The method of claim 6, further comprising a prior step of comparing the track profile for the first track to a predetermined threshold, and performing the determining step for the first track in relation to said comparison.

16. (Previously Presented) The method of claim 6, wherein the first and second tracks are disposed on a rotatable data storage medium.

17. (Previously Presented) The system of claim 11, wherein the plurality of tracks are disposed on a rotatable data storage medium of said device.

18. (Currently amended) A method comprising steps of comparing a first track profile for a first track to a predetermined threshold, and determining a head positioning profile for the first track in relation to the first track profile, a second track profile for a second track, and a third profile for a third track when the first track profile has a first value relative to the predetermined threshold, else not determining a head positioning profile for the first track when the first track profile has a second value relative to the predetermined threshold, wherein a track profile is represented by WI, the first track is represented by n, the second track is represented by n-1, and the third track is represented by n+1, the head positioning profile is represented by ZAP(n), and wherein ZAP(n) = - WI(n) – alpha*[WI(n-1) + WI(n+1)], where alpha is a value between 0 and 1.

Claims 19-21 (Cancelled).

22. (Previously Presented) The method of claim 18, further comprising repeating the comparing and determining steps for each of a plurality of tracks on a storage medium so that a first subset of the plurality of tracks have said head positioning profiles determined therefor and a second subset of the plurality of tracks do not have said head positioning profiles determined therefor.